

U.S. Patent Application Serial No. 09/893,522
Response to OA dated November 27, 2007

REMARKS

Claims 1-4 and 35-48 are being prosecuted in this application, with Claims 1, 2, 3 and 4 being independent claims.

Independent Claim 1, as amended, is to a fluid control device having a plurality of lines that comprise a plurality of fluid controllers arranged at an upper level and a plurality of coupling members arranged at a lower level, the plurality of lines arranged in parallel on a base member and having inlets directed in the same direction, with outlets thereof facing toward the same direction. The base member of the fluid control device has at least one orthogonal rail extending in a direction orthogonal to the line and each line is mounted on a respective line supporting rail of a plurality of line supporting rails, and each line supporting rail is slidably mounted on the at least one orthogonal rail relative to other of said line supporting rails, each line supporting rail, when slidably mounted, is slidable in a direction orthogonal to the line along the at least one orthogonal rail. The plurality of coupling members are slidably mounted on the line supporting rail such that each line supporting rail is slidably mounted on the at least one orthogonal rail. Independent Claim 2, as amended, is to a fluid control device having a plurality of lines that comprise a plurality of fluid controllers arranged at an upper level and a plurality of coupling members arranged at a lower level. The plurality of lines are arranged in parallel on a base member that has at least one orthogonal rail extending in a direction orthogonal to the plurality of lines, the plurality of lines have inlets directed in the same direction, with outlets thereof facing toward the same direction. In the fluid control device, each line is mounted on a line support member of a plurality of line support members, each line support

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member is mounted on the at least one orthogonal rail, and the line support member is capable of sliding along the at least one orthogonal rail relative to other of said line support members in a direction orthogonal to the line after the line support member is mounted on the at least one orthogonal rail. Each line support member is a line supporting rail removably mounted on the at least one orthogonal rail, the coupling members are slidably mounted on the rail, and each of the fluid controllers are mounted on two of the coupling members. Independent Claim 3, as amended, is to a fluid control device having a plurality of lines that include a plurality of fluid controllers arranged at an upper level and a plurality of coupling members arranged at a lower level. The plurality of lines are arranged in parallel on a base member having at least one orthogonal rail extending in a direction orthogonal to the plurality of lines, the plurality of lines have inlets directed in the same direction, with outlets thereof facing toward the same direction. The base member of the fluid control device is provided with a plurality of tracks arranged in parallel and corresponding to the respective lines, the plurality of tracks are mounted on the at least one orthogonal rail, and each track of the plurality of tracks is slidable along the at least one orthogonal rail relative to other of said tracks in a direction orthogonal to the lines after the tracks are mounted on the at least one orthogonal rail. The coupling members are slidably mounted on the corresponding track, each of the fluid controllers are mounted on two of the coupling members, and two of the coupling members are not directly connected to each other so that each coupling member can be fixed at any position of the track independently. Each coupling member has vertical internally threaded portions formed in the upper wall and each of the fluid controllers is attached to two of the coupling members by

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driving screws inserted through the controller into the internally threaded portion of the coupling member. Independent Claim 4, as amended, is to a fluid control device having a plurality of lines that include a plurality of fluid controllers arranged at an upper level and a plurality of coupling members arranged at a lower level. The plurality of lines are arranged in parallel on a base member having at least one orthogonal rail extending in a direction orthogonal to the plurality of lines, and the plurality of lines have inlets directed in the same direction, with outlets thereof facing toward the same direction. The base member of the fluid control device has a plurality of tracks arranged in parallel and corresponding to the respective lines, the plurality of tracks are mounted on the at least one orthogonal rail, and each track is slidable along the at least one orthogonal rail relative to other of said tracks in a direction orthogonal to the lines after the tracks are mounted on the at least one orthogonal rail, the coupling members are slidably mounted on the corresponding track, each of the fluid controllers are mounted on two of the coupling members, wherein slide members corresponding to the respective coupling members are provided on the track, each of the slide members are connected to the corresponding coupling member. Two of the coupling members are not directly connected to each other so that each coupling member can be fixed at any position of the track independently. Each coupling member has vertical internally threaded portions formed in the upper wall and each of the fluid controllers is attached to two of the coupling members by driving screws inserted through the controller into the internally threaded portion of the coupling member.

In the Office Action, Claims 1 and 35/1 are rejected as anticipated under 35 U.S.C. § 102(b) by Johnson (U.S. 6,076,543); Claims 1-4, 35, 37-42 and 44-48 are rejected as obvious under 35

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U.S.C. § 103(a) in view of a combination of Johnson and Itoh et al. (U.S. 6,152,175); and Claims 36 and 43 are rejected as obvious in view of a combination of Johnson, Itoh et al. and Markulec et al. (U.S. 6,231,260). Claims 5 and 6 remain withdrawn and Claims 7-34 have been canceled. Reconsideration and removal of the rejections are respectfully requested in view of the present amendments to the claims and the following remarks.

In the Office Action, it is asserted, with regard to Claims 1 and 35/1, that Johnson shows a gas line slidably mounted on a rail (42) and discloses at column 12, lines 18-29 that each rail (42) can be slidably mounted on transverse or orthogonal rails; that, with regard to Claims 1-4, 35, 37-42 and 44-48 Johnson shows the claimed device except for a tubing connecting fluid handling devices. Itoh et al. is cited to show an improvement over tubing connecting devices using coupling blocks (21) for mounting the fluid handling devices, and that provision of a spare rail for future use is considered to be an obvious expedient, as is assembling a system as recited in the present claims. It is further alleged that Johnson, as modified, shows the claimed device except for the shape of the tracks, Markulec et al. shows a gas stick system with a downward tapered groove and nut (FIG. 6a), and that it would have been obvious to have used such a downward tapered groove and nut in the system of Johnson, as modified.

Applicants respectfully submit that the Office Action is mischaracterizing the Johnson reference teachings. While it is correct that, in Johnson, a gas line is slidable along a track (42) in a direction parallel to the track, there is no support for the allegation that each rail can be slidably mounted on transverse or orthogonal rails. The language at column 12, lines 18-29 states that the

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"gas handling device" is adjustably mounted on rails coupled between adjoining stanchions. It is the entire gas handling device (40 or 118) that may be moved transversely. There is no teaching or suggestion that a line supporting rail of a plurality of line support rails (Claim 1); a line support member of a plurality of line support members (Claim 2); or a track of a plurality of tracks (Claims 3 and 4) can be moved along an orthogonal rail, relative to other such members. Claims 1-4 have been amended to better emphasize this distinction.

The Itoh et al. and Markulec references do not cure the deficiencies of Johnson and would not lead one to the present claimed fluid control device.

In view of the aforementioned amendments and accompanying remarks, Claims 1-4 and 35-48, as amended, are believed to be patentable and in condition for allowance, which action, at an early date, is requested.

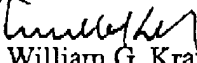
If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

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In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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